

# Control Data® 9710 Removable Storage Drive (RSD)

Designed for Original Equipment Manufacturers (OEM)

NOV 3 1982

3/82  
GD  
CONTROL  
DATA

The Control Data 9710 RSD Removable Storage Drive is a 230-millimeter rigid disk drive that uses a front-load removable data pack of 82.9 megabytes (unformatted) data capacity. The 9710 offers the capacity, speed and other performance characteristics of the CDC® 9762 Storage Module Drive (SMD) at less cost, less power consumption and in one-half the unit volume.

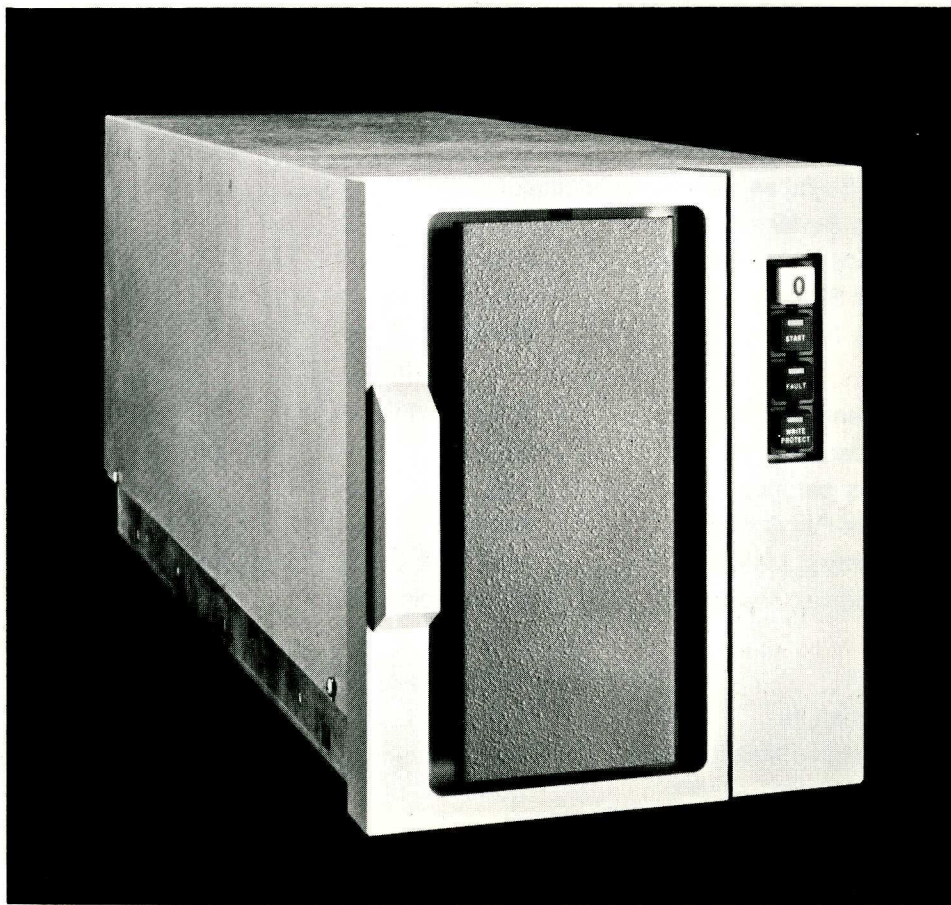
The 9710 uses the industry standard SMD interface and is plug compatible with Control Data's 14-inch products, as well as the 230-millimeter CDC 9715 FSD Fixed Storage Drive. The direct-coupled DC, brushless drive motor and universal power supply permit world-wide operations. Physical dimensions of the drive allow rack mounting in either U.S. or European enclosures.

## Features

- Rack mountable configuration only
- Detachable power supply
- Interface compatibility with SMD, MMD and CMD
- Automatic carriage lock for shipment
- Meets FCC, UL, CSA and VDE standards for a component within a system
- Daisy-chain interface compatibility
- NRZ to 2,7 RLL data conversion
- Fixed or variable sector (address mark)

## Description

The RSD is a removable media disk drive. It consists of a data pack spindle, direct coupled DC brushless motor with digital speed control, universal power supply, air supply, air filter, and an actuator. The logic package uses low power Schottky, I<sup>2</sup>L and ECL technology.



The 9710 uses Large Scale Integration (LSI) for all read/write, fault, transmitter/receiver and microprocessor controlled servo electronics.

## Applications

- Back-up for the CDC 9715, SMD/MMD
- CAD/CAM applications
- Software development programs
- Small business systems

## Accessories

- Address select plug (0-3)
- Installation/operation manual

## Options

- Removable data pack
- Rack-mounting slides
- Dual-channel access
- Maintenance manual
- Input/output cables
- Terminator
- Front panel, unique color
- Address select plug (4-7)

## Specifications

### Performance

Transfer Rate	9.677 Mhz
Spindle Speed	3,600 ( $\pm$ 18) r/min

### Access Time

(at 50 kHz step rate)

Maximum, Full Stroke	55 ms
Average	30 ms
Maximum, One Track	6 ms

### Functional

Number of Disks	3
Total Surfaces	6
Data Surfaces	5
Servo Surfaces	1
Capacity, Unformatted	82.9 Mbytes
Per Surface	16.6 Mbytes
Per Track	20 Kbytes

### Recording

Bit Density	5.4 Mbits/in <sup>2</sup>
Bits per inch	10,000
Tracks per inch	550
Tracks Per Surface	823
Recording Method	NRZ to 2, 7 RLL Code data conversion
Positioning Method	Linear voice coil

### Reliability

MTBF	8,000 hours, including power supply
Service Life	5 years
Preventive Maintenance	None
Adjustments	None

### Data Reliability

Recoverable Read Errors	Less than 1 in 10 <sup>10</sup> bits transferred
Unrecoverable Read Errors	Less than 1 in 10 <sup>12</sup> bits transferred
Seek Errors	Less than 1 in 10 <sup>6</sup> seek operations

### Power

AC	100, 120, 208, 220, 230 and 240 V; 50 or 60 Hz
DC	+ 5 V logic, 3.25 A; - 5 V logic, 4.25 A; + 24 V control accessing, 0.5 A (4.5 peak); - 24 V control accessing, 0.3 A (4.5 peak) + 42 V DC spindle motor, 1.6 A
Power Dissipation	200 W (723 Btu/h)

### Environmental

Operating Temperature	10° C to 45° C (50° F to 114° F)
Non-Operating Temperature	- 40° C to 60° C (- 40° F to 140° F)
Operating Humidity	20% to 80% RH
Non-Operating Humidity	5% to 95% RH

### Altitude, Sea Level Ref.

Operating	- 300 m to 2,000 m (- 983 ft. to 6,560 ft)
Non-Operating	- 300 m to 2,500 m (- 983 ft to 8,200 ft)

## Physical Characteristics

Width	216 mm (8.5 in)
Height	259 mm (10.2 in)
Depth	762 mm (30 in) with power supply; 641 mm (24.25 in) without power supply
Weight	27 kg (60 lb) with power supply

Control Data Sales offices are located in principal cities throughout the world.

Control Data Corporation  
OEM Product Sales  
P.O. Box 0  
Minneapolis, MN 55440 U.S.A.

Specifications subject to change without notice.